

ANNUAL WATER WITHDRAWAL AND USE REPORT**GROUNDWATER SUMMARY 2011****OWNER OF GROUNDWATER RIGHT**

ARNELL PATRICIA C
4491 E FT LOWELL RD
TUCSON, AZ 85712

TYPE OF RIGHT

IRRIGATION USE

RIGHT / PERMIT NO.

58-160065.0001

REPORTING PARTY

58-160065.0001
ARNELL PATRICIA C
4491 E FT LOWELL RD
TUCSON, AZ 85712

TUCSON

(602) 771-8585

LOCATION: SE 27 13.0S 14.0E

ALLOTMENT: 75.00 AF ACRES: 19.52

If any of the information pre-printed on this report is incorrect, please make the necessary changes.

PART I GROUNDWATER WITHDRAWN

From Box 14 Schedule A or Schedule A-GSF attached
Complete this section only if you operate a non-exempt well.

16.8 \$ 3.00 \$ 50.40

ACRE - FEET X Withdrawal Fee =

PART II WATER DELIVERED TO OTHER RIGHTS

From Box 24 Schedule D attached

ACRE - FEET

PART III WATER RECEIVED FROM OTHER SOURCES

Total from Schedule E attached

ACRE - FEET

PART IV TOTAL WATER USED BY THIS RIGHT

Calculate as follows : Part I + Part III - Part II

16.8 ACRE - FEET

PART V LATE FEES

Complete if filing after March 31.

Note: A portion of a month after March 31 is counted as a full month.

1) Enter number of months late (Maximum of 6)

2) Calculate Late Report Fee \$

(\$25.00 X number of months late)

3) Calculate Late Payment Fee \$

(10 % X number of months late X withdrawal fee calculated in Part I above)

PART VI TOTAL FEES DUE

Add amounts from Parts I and V

\$ 50.40

Mail or hand deliver this report, together with the appropriate schedules, worksheets and fees to the Arizona Department of Water Resources. If mailed, the report must be postmarked no later than March 31, 2012. If hand delivered, the report must be received by the Department's Annual Reports & Planning Section no later than 5:00 PM on March 31, 2012.

REPORTS FILED AFTER MARCH 31, 2012 ARE SUBJECT TO LATE FEES (A.R.S. § 45-632) AND PAYMENT OF PREVIOUSLY WAIVED MONETARY PENALTIES ASSOCIATED WITH PRIOR GROUNDWATER CODE VIOLATIONS.

I hereby certify, under penalty of perjury, that the information contained in this report is, to the best of my knowledge and belief, true, correct and complete.

X

Patricia C. Arnell

AUTHORIZED SIGNATURE

OWNER

TITLE

MARCH 29, 2012

DATE

PATRICIA C. ARNELL

PRINTED NAME

520-881-0457

TELEPHONE NUMBER

NOTE: THIS REPORT MUST BE FILED EVEN IF NO WATER WAS USED PURSUANT TO THIS RIGHT.

REPORT OF PUMPING

ARIZONA DEPARTMENT OF WATER RESOURCES

Owner

ARNELL PATRICIA C

1 RIGHT/PERMIT/BMP Farm Unit NO.

58-160065.0001

ANNUAL REPORT 2011

Note: Pumpage for each well must be shown on the attached well worksheets. Information for up to four wells may be shown on each worksheet.

[illegible]

* ENTER TOTAL ACRE-FEET OF GROUNDWATER WITHDRAWN IN PART I OF THE SUMMARY PAGE.

rev. 10/09

** ENTER ACRE-FEET OF TOTAL WATER PUMPED IN PART IV D. 1 OF THE SCHEDULE AWS.

* REPORTED PURSUANT TO TYPE 2 58-102237-0000

WORKSHEET W-1 2011

GROUNDWATER RIGHT/PERMIT/ 58-160065.0001
BMP Farm Unit NO.

| | | | | | | | |
|---|------------------------------------------|----------------------------|--------------|---------------------------|-------------------------|-------|-------|
| 1 | DWR WELL REGISTRATION NO. 55-609323 | 10 Q | 40 Q | 160 Q | LOCATION Sec Twn Rng | | |
| | | NW | SE | SE | 27 | 13.0S | 14.0E |
| 2 | TYPE OF MEASURING DEVICE TOTALIZER | MAKE / MODEL ABB | | | | | |
| | SIZE | UNITS MEASURED GAL | | | | | |
| | INSTALLATION OR OVERHAUL DATE 11/2/10 | | | | | | |
| 3 | POWER CO. NAME TUCSON ELECTRIC POWER | ACCOUNT NO. 1805-3120-3 | | POWER METER NO. ARNELL | | | |
| | ENERGY CONSUMPTION 26367 | | UNITS KWH | | | | |

4 DOES ENERGY METER SERVE USES OTHER THAN THE WELL PUMP? ☒ Yes ☐ No
ENTER "Y" OR "N" IN COLUMN 5 OF SCHEDULE A

| WATER TOTALIZING METER READINGS | | |
|---------------------------------|-------------|--------------|
| 5 INITIAL | 6 ENDING | 7 DIFFERENCE |
| 96,105,600 | 100,882,300 | 4,776,700 |

IF METER WAS REPLACED DURING THE YEAR, INDICATE BEGINNING AND ENDING READING FOR EACH METER IN THE BOXES ABOVE

| | |
|---------------------|----------------------|
| 8 ACRE FEET 14.7 | 9 BREAKDOWN ESTIMATE |
|---------------------|----------------------|

Enter total Acre-feet
Shown in 10 In Column 13 of Schedule A

| |
|-------------------------------|
| 10 TOTAL IN ACRE-FEET 14.7 |
|-------------------------------|

| | | | | | | | |
|---|------------------------------------------|-----------------------------|--------------|---------------------------|-------------------------|-------|-------|
| 1 | DWR WELL REGISTRATION NO. 55-802444 | 10 Q | 40 Q | 160 Q | LOCATION Sec Twn Rng | | |
| | | SW | SE | SE | 27 | 13.0S | 14.0E |
| 2 | TYPE OF MEASURING DEVICE TOTALIZER | MAKE / MODEL MC CROMETER | | | | | |
| | SIZE | UNITS MEASURED GAL | | | | | |
| | INSTALLATION OR OVERHAUL DATE 8/15/06 | | | | | | |
| 3 | POWER CO. NAME TUCSON ELECTRIC POWER | ACCOUNT NO. 1805-3135-3 | | POWER METER NO. HARCUS | | | |
| | ENERGY CONSUMPTION 15,360 | | UNITS KWH | | | | |

4 DOES ENERGY METER SERVE USES OTHER THAN THE WELL PUMP? ☒ Yes ☐ No
ENTER "Y" OR "N" IN COLUMN 5 OF SCHEDULE A

| WATER TOTALIZING METER READINGS | | |
|---------------------------------|------------|--------------|
| 5 INITIAL | 6 ENDING | 7 DIFFERENCE |
| 13,811,900 | 15,674,100 | 1,862,200 |

IF METER WAS REPLACED DURING THE YEAR, INDICATE BEGINNING AND ENDING READING FOR EACH METER IN THE BOXES ABOVE

| | |
|---------------------|------------------------------|
| 8 ACRE FEET 5.72 | 9 BREAKDOWN ESTIMATE 2.34 |
|---------------------|------------------------------|

Enter total Acre-feet
Shown in 10 In Column 13 of Schedule A

| |
|------------------------------|
| 10 TOTAL IN ACRE-FEET 8.1 |
|------------------------------|

| | | | | | | | |
|---|-----------------------------------------|---------------------------|---------|-----------------|-------------------------|-------|-------|
| 1 | DWR WELL REGISTRATION NO. 55-802445 | 10 Q | 40 Q | 160 Q | LOCATION Sec Twn Rng | | |
| | | SW | SE | SE | 27 | 13.0S | 14.0E |
| 2 | TYPE OF MEASURING DEVICE TOTALIZER | MAKE / MODEL | | | | | |
| | SIZE | UNITS MEASURED | | | | | |
| | INSTALLATION OR OVERHAUL DATE | | | | | | |
| 3 | POWER CO. NAME TUCSON ELECTRIC POWER | ACCOUNT NO. NOT IN USE | | POWER METER NO. | | | |
| | ENERGY CONSUMPTION | | UNITS | | | | |

4 DOES ENERGY METER SERVE USES OTHER THAN THE WELL PUMP? ☐ Yes ☒ No
ENTER "Y" OR "N" IN COLUMN 5 OF SCHEDULE A

| WATER TOTALIZING METER READINGS | | |
|---------------------------------|----------|--------------|
| 5 INITIAL | 6 ENDING | 7 DIFFERENCE |
| | | |

IF METER WAS REPLACED DURING THE YEAR, INDICATE BEGINNING AND ENDING READING FOR EACH METER IN THE BOXES ABOVE

| | |
|-------------|----------------------|
| 8 ACRE FEET | 9 BREAKDOWN ESTIMATE |
|-------------|----------------------|

Enter total Acre-feet
Shown in 10 In Column 13 of Schedule A

| |
|-----------------------|
| 10 TOTAL IN ACRE-FEET |
|-----------------------|

| | | | | | | | |
|---|---------------------------------------|----------------|---------|-----------------|-------------------------|--|--|
| 1 | DWR WELL REGISTRATION NO. | 10 Q | 40 Q | 160 Q | LOCATION Sec Twn Rng | | |
| | | | | | | | |
| 2 | TYPE OF MEASURING DEVICE TOTALIZER | MAKE / MODEL | | | | | |
| | SIZE | UNITS MEASURED | | | | | |
| | INSTALLATION OR OVERHAUL DATE | | | | | | |
| 3 | POWER CO. NAME | ACCOUNT NO. | | POWER METER NO. | | | |
| | ENERGY CONSUMPTION | | UNITS | | | | |

4 DOES ENERGY METER SERVE USES OTHER THAN THE WELL PUMP? ☐ Yes ☐ No
ENTER "Y" OR "N" IN COLUMN 5 OF SCHEDULE A

| WATER TOTALIZING METER READINGS | | |
|---------------------------------|----------|--------------|
| 5 INITIAL | 6 ENDING | 7 DIFFERENCE |
| | | |

IF METER WAS REPLACED DURING THE YEAR, INDICATE BEGINNING AND ENDING READING FOR EACH METER IN THE BOXES ABOVE

| | |
|-------------|----------------------|
| 8 ACRE FEET | 9 BREAKDOWN ESTIMATE |
|-------------|----------------------|

Enter total Acre-feet
Shown in 10 In Column 13 of Schedule A

| |
|-----------------------|
| 10 TOTAL IN ACRE-FEET |
|-----------------------|

SEE METER MALFUNCTION LETTER & REPORT



Arizona Department of Water Resources
3550 North Central Avenue
P.O. BOX 33589 Phoenix, Arizona 85067-3589

MEASURING DEVICE MALFUNCTION REPORT FORM
PART 1 – NOTIFICATION

INSTRUCTIONS

- A.A.C. R12-15-906 requires that a report must be made in writing to the Department of Water Resources within seven (7) calendar days of discovering that a water measuring device has malfunctioned, if the malfunction last 72 hrs or longer.
- NOTE:** Return Part 1 only to report malfunction.

AMA: ☐ Phoenix ☐ Pinal ☐ Prescott ☐ Santa Cruz ☐ Tucson

Well Owner / Operator: Patricia C. Arnell Facility Name: _____

Address: 4415 E. Ft. Lowell Rd., Tucson, AZ 85712 Phone: 520-881-0457

Well Registration Number: 55- 802444 Rights Registry Number: _____

Measuring device type: McCrometer Malfunctioned on: 10/1/2011 (est) (date).

Reason: Low reading observed See attached Letter Will be back in service on TBD (date).

CARL KOMINSKY
Print Name

Carl Kominsky
Sign Name

MARCH 29, 2012
DATE



Arizona Department of Water Resources
3550 North Central Avenue
P.O. Box 33589
Phoenix, Arizona 85067-3589

MEASURING DEVICE MALFUNCTION REPORT FORM

PART 2 – RETURN TO SERVICE AND PUMPAGE ESTIMATE

INSTRUCTIONS

- A.C.R.R. R12-15-906 requires that a malfunctioning measuring device must be returned to service within 30 days of reporting to the Department. If there is a delay, write to the Department at the above address to explain.
- An estimate of the pumpage during the time the meter was not functioning is also required. **Use** reverse side of form for your estimate of pumpage.
- **NOTE:** Return Part 2 only to report the measuring device has been returned to service.

AMA: ☐ Phoenix ☐ Pinal ☐ Prescott ☐ Santa Cruz ☒ Tucson

Well Owner / Operator: Patricia C. Arnell Facility Name: _____

Address: 4415 E. Ft. Lowell Rd., Tucson, AZ 85712 Phone: 520-881-0457

Well Registration Number: 55- 802444 Rights Registry Number: _____

Measuring device on this well was returned to service on 3/1/2012 (date).

I estimate the withdrawal made while the measuring device was malfunctioning was: 2.3 (acre-feet).
(Worksheet provided)

Carl Kominsky, RLA
Print Name

Carl Kennedy
Sign Name

March 29, 2012
DATE

DAILY LOG OF HOURS WELL WAS PUMPED
additional sheets may be used

[illegible]

Discharge (Q) rate as measured with new or repaired meter or device

gallons per minute (gpm)

$$\frac{\text{Total hrs}}{\text{Total hrs}} \times 60 \div 325,851 = \frac{\text{acre-feet pumped}}{\text{acre-feet pumped}}$$

Where:
 Q = Discharge of well in gallons per minute
 60 = number of minutes in one hour
 $325,851$ = number of gallons in one acre-foot

Carl Kominsky Landscape Architect, Inc.

(520) 740-0700

5609 N. Camino Del Sol, Tucson, AZ 85718

fax (520) 623-9747

March 29, 2012

Tucson Active Management Area
Arizona Department of Water Resources
3550 North Central Avenue
Phoenix, AZ 85012-2105

Re: DWR Well #55-802444, Patricia C. Arnell

The referenced well had an apparent meter malfunction discovered on December 1, 2011. It was observed that the meter had not registered any water flow since October 1, 2011 even though the normal amount of water was used during that period. It appears that the meter was not accurately recording in October, November and December 2011.

The meter was removed and examined during this period and it was determined that the meter was functioning properly. The low readings were due to the degradation of the pump resulting in low flows and velocities that were below the threshold of the device to rotate the propeller at a rate to read accurately. These findings were verified using flow tests. Because the well pump uses a storage tank and booster pump and was able to produce enough water to meet the needs of the site, the total amount used was not impacted by the low well production. The low efficiency of the pump has also resulted in disproportionately high electrical use for the well. The high electrical usage was also due in part to a 25% decline in the water table.

The flow meter at the well was reinstalled on March 1, 2012 however it will not be capable of accurately reporting flow until the well pump is replaced.

The conservative methodology used to account for the missing data was to take the average monthly water pumped for the (4) months preceding the malfunction (254,000 gallons per month), and apply this quantity for the months of October, November and December. These three months would then account for an estimated 2.34 AF.

| | |
|----------------------------------|---------|
| Measured Use 1/1/11-10/1/11 | 5.72 AF |
| Estimated Use During Malfunction | 2.34 AF |
| Total Estimated Use 2011 | 8.1 AF |

For reference, the reported use for this well for the year 2010 was coincidentally 8.1 AF which is consistent with the perceived use.

Please let me know if additional information is required.

Sincerely,


Carl Kominsky, RLA, ASIC